Asset Management Guide

SPORT AND RECREATION FACILITIES

JANUARY 2004

A guide for sport and recreation facility owners and managers

Department of Sport and Recreation
Government of Western Australia

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Foreword

Western Australians are fortunate to have a large number of quality sport and recreation facilities. They are a key feature of our successful sport and recreation industry and a vital part of the way we live.

The community expects facilities to be safe and attractive places in which to be physically active. It expects well-maintained facilities that reflect value for money and a reason to keep coming back.

So, it is vital that anyone who is responsible for the management and maintenance of a sport and recreation facility has an asset management plan in place.

In many cases the managers of the most recently built facilities in WA are already doing this, but there are many ageing and poorly maintained facilities that need attention.

Maintaining or renewing these facilities has been complicated by issues such as:

- A lack of planning information due to poor quality asset registers or a lack of registers being kept;
- Too much focus on creating assets rather than renewing them;
- Maintenance allowances in council budgets are often not a true reflection of need and do not support sound asset management principles;
- Increasing community expectations of what will be provided, how much, where and the standard at which it will be provided;
- Councils believe they have to have the same type and quality of facilities as neighbouring councils or towns; and
- Increasing corporate governance requirements.

The Department of Sport and Recreation has developed this Asset Management Guide as a starting point for local government officers, elected members and state sporting organisations to develop asset management plans.

It is a reference tool that I expect will become an important part of your business management and, when applied, will reflect your desire to achieve good corporate governance.

I commend this guide to you and wish you well as you begin to develop and implement comprehensive asset management plans so that Western Australians can continue to enjoy access to sport and recreation facilities that encourage and promote physically active lifestyles.

Ron Alexander
Director General
Department of Sport and Recreation
October 2003

Contents

Executive Summary

You are reading this guide because you are responsible for the management and maintenance of sporting and recreational facilities.

It contains a series of practical tools to help you through the process of developing an asset management plan so that your facilities are productive and sustainable.

Sport and recreation facilities are integral to our daily lives and we all rely on them to help us to continue our healthy and active lifestyles.

It is now more widely acknowledged that whole of life asset management is critical to sustain a level of service to clients and provide a return to you as the owner or operator of the facility.

We expect our sport and recreation assets to provide specific services at an acceptable level. Whether it is a playing field or a large recreation building, each needs to be managed so that they do what we expect of them.

When you have developed an effective asset management plan you will be ready for a range of eventualities that could affect the future of your asset. It will also give you confidence that you can adapt to the effects of environmental, social and economic factors.

Whether you are in local government or a sporting organisation, this guide will provide you with an appreciation of the benefits of strategic asset management. It will also help you to consider the financial and economic requirements of asset management and the treatment and management of risk and liability.

We have included practical examples and appendices to show you how to apply asset management principles effectively to enable you to continue to provide and maintain key assets with a greater level of sustainability. You can adapt the appendices as needed so they reflect your particular organisation's needs.

This Guide

You can apply asset management principles equally to all physical assets including: infrastructure; property; heritage; reserves; water bodies; and plant and equipment.

A critical issue is the extent and degree to which these principles need to be translated into management action.

Whether you are an executive or senior manager in a local authority, executive officer or office bearer of a sporting body or recreation group, it is important for you to identify your key assets.

ASSET MANAGEMENT PRINCIPLES

Below are some primary considerations for asset management principles:

- Asset management decisions are integrated with strategic planning;
- Asset planning decisions are based on an evaluation of alternatives that consider 'life cycle' costs, benefits and risks of ownership;
- Establish accountability for asset condition, use and performance;
- Disposal decisions are based on analysis of the methods that will achieve the best available net return in an environment of social equity; and
- Establish an effective internal control structure for asset management.

1.0 Integrated Planning

Deciding whether to acquire, replace, use, maintain or dispose of an asset should be part of your organisation's overall strategic plan.

You can achieve this by linking assets with program delivery standards and strategies.

As a local authority, sport or recreation organisation or multi-sport facility, developing an asset strategy will complement your operational or business plans.

KEY SUCCESS FACTORS

- Asset functions are assessed against and matched with program delivery standards or service delivery strategies;
- The asset strategy time frame is matched with the corporate planning horizon (typically five years) and ideally extends over the life of longer-lived assets; and
- Capital and recurrent (operating) costs are incorporated in the asset strategy which link with budgets in the financial management strategy.

PRINCIPAL ISSUES

1.1 Integrating asset provision and the organisation's strategic goals

All organisations need direction and should undertake regular strategic planning. A typical strategic plan looks ahead up to five years. Part of the strategic planning process will include issues or events that could have an impact on your organisation's operations.

Asset management planning should be part of the mission and vision of your organisation so you should link resource planning to your long-term objectives.

The *Local Government Act 1995* requires all local authorities to undertake an annual "Principle Activities Plan" that looks at what the authority will do over the next 12 months. Many councils are now including longer-term strategic planning in addition to principle activity planning.

Similarly, your sport or recreation organisation should set out your long-term strategic goals to give you an appreciation of the need for asset management and provision to support program initiatives.

In an environment of sustainability your organisation must also consider the needs of user groups and the capacity of current assets to meet those needs.

You should consider:

- ***Standards*** *— Asset delivery that is consistent with the level of service or participation by user groups.*
- ***Utilisation*** *— Providing opportunities for the asset to deliver services to the maximum number of users.*
- ***Maintenance*** *— Maintaining the asset to ensure it achieves its useful functional life at optimum service delivery standards, in addition to minimising (recurrent) operating expenditure.*
- ***Investment*** *— Ensuring adequate funding has been identified to support maintenance standards and regimes, usage and eventual replacement.*
- ***Legal Obligations or Regulator Standards*** *— Ensuring that the provision and management of assets fully consider both stated and prevailing legal obligations and regulatory standards.*

We will look at each of these key strategic areas later in this guide.

1.2 Demand/Gap Analysis

User demand is a fundamental component of any asset provision and management analysis.

It is an effective way to determine current and projected usage of a facility and any shortfall between that demand and the present level of asset provision.

So, if your organisation is considering taking over or acquiring an asset you should find out what the facility or asset is currently delivering and how it is being used.

These investigations should include:

- Trend Analysis;
- Demand Analysis;
- Supply Analysis; and
- Gap/Deficiency Analysis.

The results should help you to identify any areas that deviate from the present level of asset provision. A needs analysis will provide useful information to help you make quality asset management decisions.

Information on how to conduct a needs analysis can be found at the Department of Sport and Recreation's website www.dsr.wa.gov.au.

A needs analysis is normally undertaken for new facilities, but the process works equally well with new or upgraded facility or asset provision. Implementing and reviewing a needs analysis can be subjective and should be supported by empirical data and standards for like facilities or assets.

In cases where it is critical for you to comply with existing standards you should refer to ISO9001: 2000 which details the methodology to be used.

You should only take action in relation to an identified gap in asset service provision if it is consistent with your organisation's strategic goals and if it falls within your organisation's area of responsibility.

1.3 Understanding Critical Success Factors

Critical success factors are those issues that your organisation decides are fundamental to the successful running of your facility or asset.

They are linked closely with associated risk management strategies and the paramount reasons for undertaking asset management strategies.

An example would be the effective management of a chemical system at an aquatic centre. Providing a primary and back-up system to correctly disburse chemicals would be critical to the success of the management of the facility.

Critical success factors need not involve life-threatening situations, but would typically be those that would stop you from delivering the primary service provided by your asset.

Critical success factors should be identified while undertaking strategic asset planning and apply a weighting to ensure that each separate critical success factor is highlighted and addressed as part of an integrated asset management plan.

Outcome

Integrating your asset management strategy into an operational or business plan will provide you with a framework to get the optimum use out of existing and new assets.

2.0 Asset Planning

An effective asset planning framework will include an evaluation of the alternatives to acquiring a new asset and the replacement of an existing asset. The evaluation will include a comparison of life-cycle costs.

An acquisition plan details the rationale for acquiring, upgrading or replacing an asset.

It will include:

- The method of acquisition;
- Timing and amount of capital; and
- Recurrent funding required.

KEY SUCCESS FACTORS

- Management has established that existing assets are fully utilised, meet functional requirements and perform at optimal levels;
- Genuine consideration has been given to the decision of 'non-asset' solutions such as use of the private sector or demand management; and
- All costs, expressed and implied, are included in consideration of life-cycle costs.

Implied costs may include a notional interest cost on funds used to acquire assets.

Expressed costs will include direct and indirect operating costs.

PRINCIPAL ISSUES

2.1 Scenario planning

Scenario planning is extremely important when considering the key factors that will influence asset planning in the future.

The aim of scenario planning is to identify signposts (either triggers or warnings) and decide upon the most appropriate way to exploit opportunities or minimise threats.

Scenario planning will help your organisation to see how different forces can manipulate the future and help you to understand and prepare for uncertainty.

For the sport and recreation industry, scenario planning will help you to consider participation and utilisation trends; changing demographics; changing legal obligations and make more informed asset provision decisions.

To gain an understanding of the benefits of scenario planning, you must look at current situations and compare them with the rationale supporting the original decision.

Example

Consider the air handling system associated with an aquatic redevelopment.

The system collects air from inside the complex and pumps it outside and provides fresher outdoor air for patrons inside the facility. The problem is that both air vents are located on the same external wall. The primary issue is that the exhaust vent was located on the windward side of the supply vent, which meant that some of the exhausted air was being drawn back into the building.

Scenario planning would have considered alternative designs to achieve better construction and operational outcomes.

The optimum approach to scenario planning can be distilled into the following points:

- Clarifying the strategic directions your organisation wishes to pursue and using scenario planning to consider options including how to anticipate uncertainty.
- Analysing the full range of macro and micro-environmental forces affecting a decision. These may include political, environmental, economic and social forces.
- Create and play out scenarios structured around critical drivers, environmental forces and uncertainties associated with the decision focus. Combine analytical thinking with intuition.
- Relate the potential outcomes of the scenarios to an organisation's strategic business initiatives.

2.2 Consideration of asset/non-asset solutions

You should consider all available alternatives if your asset planning is to address community demand for new or improved sport or recreation services.

This would include:

- Investigating the options for enhanced or expanded services at an existing owned or externally leased facility (program based alternatives);
- Considering an option to expand asset provision at an existing owned facility or externally leased facility (asset based alternatives);
- Contemplate the costs and implications of constructing additional facilities to meet the community need, or refurbishment or redevelopment to address needs; and
- Analysing the alternatives for including the private sector in providing or building facilities to meet community needs.

Each of these points should be considered against a baseline option of the consequences of adopting a 'do nothing' alternative.

As a logical follow on from scenario planning, the implications of deciding either an asset or non-asset solution should be supported by qualitative, quantitative and empirical data to show the benefits, consequences and costs associated with each alternative.

There are two basic asset alternatives you must consider if you are planning to acquire a new asset to satisfy a community need:

- Improve the performance of your existing asset; or
- Build, purchase, share lease or enter into an arrangement with the private sector.

The capacity to recover full operational costs – let alone capital costs — in the provision of community sporting or recreational facilities is minimal. This is due largely to clubs and sporting groups historically having dedicated use of facilities, which limits opportunities to maximise use. Returns would be greater if the operational and capital costs could be spread across a larger user base. Therefore, collocation is a highly effective model compared with single use facilities.

For many years, lawn bowls has enjoyed broad community sport. However, our changing society and community preferences have diminished the sport's sustainability of facilities. A declining membership base and the need to upgrade facilities has meant the sport has had to consider broader options.

A number of bowling clubs in the metropolitan area have considered two successful options:

- Amalgamation — which results in greater club strength and viability; and
- Collocation with similar sports, such as petanque.

Both approaches result in a level of concern among members but the opportunity to expand the membership base provides a greater opportunity for the facility to be sustainable by using a non-asset approach.

2.3 Materiality

Materiality refers to issues that are directly relevant to the decisions you make about asset management. They may include:

- Financial impact of a proposal including capital and operational costs;
- Design of a facility that supports another asset and is constructed elsewhere, i.e. facilities that support like for like designs and services;
- Technical or functional complexity of a project;
- Environmental impact and the potential requirement for public environmental review;
- Financial comparisons of the options; and
- Relative level of risk involved – asset performance, political, financial, procurement, delivery or management.

You should consider each of these issues and weigh each one to reflect their order and level of importance.

2.4 Maintaining assets at an agreed level of service

Having previously established that an asset exists to provide a specific service, you must now work out how the asset will deliver an agreed level of service and continue to meet the expectations of those who use it.

The owner and the operator must agree on their roles and responsibilities whether they are the same organisation or separate. Roles and responsibilities must be put in writing and clearly state the expectations of each party.

Setting benchmarks provides a sound basis on which to establish what the asset is expected to achieve operationally.

Benchmarking would look at key result areas (KRAs) necessary to understand and agree upon operational parameters and outcomes. The owner and the operator would use the KRAs to identify and agree upon key performance indicators (KPIs).

See Appendix A for examples of KRAs and KPIs.

Once these have been established and agreed, it is customary for the asset owner and operator to form a joint working group to meet and discuss the ongoing performance of the asset. The working group should meet monthly or a minimum of every three months.

The agreement between the owner and the operator should also provide the opportunity to vary the delivery of services provided by the asset.

Outcome

A more efficient and cost-effective asset management framework that will reduce demand for new assets, extend asset life, lower program costs and improve delivery of services or products.

3.0 Accountability for Assets

PRODUCT

An operation and maintenance plan which establishes standards for the level of use, condition, maintenance and performance of assets. The plans also document the resources required to operate and maintain assets.

KEY SUCCESS FACTORS

- Control of, and accountability for, assets is established at the program level;
- Fiscal responsibility for assets is established through the budget process and by attributing and allocating costs;
- Establishing condition, use and performance measures; and
- The standard of performance of assets is considered as part of the next planning cycle.

PRINCIPAL ISSUES

3.1 Asset accounting principles and their effects on depreciation

The contemporary accounting model is accrual accounting, which recognises debts and revenues when they are incurred or earned. The other more traditional method is cash accounting, which recognises debts and revenues when they are received or paid.

For asset management, an overarching principle in accrual accounting requires that funds (as a balance sheet item) be set aside in reserve accounts to replace the asset at the end of its economic life.

Example

Swimming pool filtration and pumping equipment may have an economic life of 15 years.

With straight-line depreciation, the full new purchase price of the asset ($500,000) would be divided by 15 and that amount ($33,333) placed into a reserve account each year.

The annual depreciated (or accumulated) amount of $33,333 becomes a cost to the organisation and is recognised as a non-current liability on the balance sheet.

Additionally, works undertaken that materially affect the life, capacity or performance of the asset need to be recognised as capital expenditure and have a direct impact on the calculations of depreciation.

Further information can be gained by accessing *Accounting Standard AASB 1021*.

In a cash accounting environment, some organisations may not account for depreciation by this method. However, in terms of sustainable asset management, setting aside funding for future replacement is highly regarded.

In appreciating the financial impacts that operational changes have on assets, you should factor issues such as betterment, rehabilitation, acquisitions, enhancements or replacements into the depreciation equation.

Capital investment decisions concerning these issues are dealt with in 3.2 below, though they are based upon operational performance requirements.

Costs associated with consumable items associated with the asset are not considered capital expenditure and are not considered within the depreciation equation.

3.2 Performance requirements, condition recording and reporting

When you review an asset you should remember that it exists to serve a specific purpose. You should also consider the issues raised in the Integrated Planning section of this guide (see page 6).

Asset performance should directly relate to operational requirements in the strategic plan and demonstrate that they are required and are performing at the desired level (refer 2.4 on page 10).

To ensure that performance requirements are being met, you should carry out regular condition reports. While closely linked to the risk management process, condition reporting is where you examine your asset to be sure that its operation service delivery targets are being met.

Assessing the condition of an asset involves systematically examining components and systems and documenting their condition according to the relevant standards for each element.

Recording the assessments will help with forecasting and benchmarking maintenance expenditure. The information will help to keep your asset register current. It will also be a guide to identifying under-utilised and over-utilised assets.

Equally important is the environmental condition of the asset. This means where the primary asset or facility is located and what is surrounding it that may influence its performance.

A condition report will identify risks immediately near the primary asset that demand attention.

For examples see Appendices D, E, F, G, H.

The reporting of asset condition has a direct bearing on the preparation of your organisation's annual budget for operational and capital expenditure, in addition to strategic planning implications.

3.3 Management and maintenance of an asset register

Your organisation should develop and maintain an accurate asset register to:

- Record the existence of an asset;
- Determine its residual value;
- Apportion a 'life of asset' value; and
- Factor changes in either economic or service values.

Recording and maintaining information on an asset register must be carried out according to provisions set out by Australian Accounting Standards Board (AASB).

It is important that the information is calculated as it relates to asset life and depreciation rates. To ensure accuracy in financial reporting and reserve account management, the calculation of annual depreciation for like assets should occur equally between different organisations.

3.4 Creating, storing and communicating asset information

Information on asset management should be recorded and stored so that it is easily maintained and transparent across operating systems. This can be done using common proprietary software packages and generic spreadsheets.

Your organisation should follow contemporary management practices and have up to date asset recording systems, electronically and in hard copy. Copies of this information should also be stored off site in the event that it is destroyed.

The information should be user friendly and easy to understand. Where possible you should include footnotes or explanatory comments so that all staff can clearly understand what has been recorded and where it is kept, with cross-referencing to explanatory notes, accounting standards or legislative requirements. The information should be distributed from time to time to maintain its operational integrity.

Outcome

Effective accountability mechanisms will establish a culture where assets are adequately maintained and protected and, through optimisation of performance, maximise their outputs or service potential.

4.0 Internal Control Structures

An effective internal control structure will establish and promulgate asset policies and procedures and use an information system that provides reliable, relevant and timely data with which to make informed asset management decisions.

PRODUCT

A policy and procedure manual which details the requirements for effective governance of assets is complemented by an information system, based on an asset register, which provides the financial and non-financial information necessary to manage assets.

KEY SUCCESS FACTORS

- The policies and procedures address all aspects of the asset life cycle, are promulgated to all relevant staff and are updated regularly;
- Staff involved in asset management receive training commensurate with their responsibilities;
- The asset register contains data on acquisition, asset identification, accountability information, performance, disposal and accounting;
- The asset register is integrated with the financial and budgetary systems; and
- Asset information is readily accessible to staff who are accountable for assets.

PRINCIPAL ISSUES

4.1 Economics and budgetary management

In simple terms, your organisation must budget for the full costs associated with the development and management of assets or facilities. This provision extends beyond the cost of building or buying the asset and includes all costs associated with running and maintaining the asset until you no longer own or operate it.

Where possible you should involve the operational staff in the development of the budget because they have detailed knowledge of the day-to-day and ongoing costs associated with the asset. However, ultimate budgetary control rests with the manager appointed to oversee the facility or asset.

The budget must incorporate the full life-cycle costs associated with the asset. Life-cycle costing is a complex process and should be based upon the concepts of accrual accounting. The Department of Sport and Recreation will develop life cycle costing guidelines in the near future. Until then, we encourage you to consult the relevant Australian Standard AS/NZS 4536:1999.

4.2 Service level agreements

A service level agreement (SLA) is a contract between a facility asset owner or manager and an organisation engaged to deliver services associated with the primary asset.

From a customer's perspective, there should be a seamless relationship between the principal and the SLA organisation.

The delivery of this service is affected by a number of key elements:

- Services to be delivered;
- Performance tracking and reporting;
- Problem management;
- Form and consideration; and
- Roles and responsibilities.

For an example of a service level agreement see Appendix B.

Services to be delivered

The principal — or asset owner — typically enters into an arrangement where a service or number of services associated with the function of an asset are provided by a second organisation.

The principal must be satisfied that these services, while important, are not core to the function of the asset or facility and can be adequately carried out by other parties. In these circumstances, it is important that the principal establishes a risk management strategy directly associated with the service that is being transferred to the second party.

Once the risk management strategy has been established, both parties should develop a formal agreement setting out the rights and responsibilities associated with the services to be undertaken.

This kind of arrangement must support an agreed level of asset performance to ensure that continuity of asset service is assured to users.

Performance tracking and reporting

The principal must ensure that the level of service being provided by the contracted organisation supports both a level of service continuity and asset quality.

Both organisations should agree on how to measure and track performance, particularly in relation to asset management. The aim is to make sure that the principal is fully aware of the condition and serviceability of its assets and facilities.

Problem management

The SLA must clearly set out the rights and obligations of the principal and service provider, particularly the delivery of services and management of facilities and assets under the control of the service provider.

Both parties should be clear on their rights and obligations so that each understands the other's obligations.

A management committee should be established and it should meet regularly to discuss issues of service delivery, management and maintenance of the principal's assets or facilities. This type of forum is the best way to ensure that both parties have regular contact.

Form and consideration

The SLA should clearly set out the fees and charges associated with the contract. Further, both parties should understand the true level of their economic exposure.

The SLA must also detail penalties for breaches of contract by either party, and how they will be identified. The contract should clearly state how issues can be mediated and/or remedies available to each party, including (but not limited to) liquidated damages.

Roles and responsibilities

In order for the relationship between the principal and the service provider to be maintained, the SLA should clearly document the roles and responsibilities of each party.

Further, it is important that each organisation agree to a process that provides the opportunity to contractually amend their roles and responsibilities to deliver process benefits that will enhance asset or facility utilisation.

4.3 Linking asset management to risk management (AS4360 and Handbook 246 – 2002)

Risk management has become a formal management tool to systematically identify and manage risks throughout the life-cycle of an asset. The process helps to meet service delivery more efficiently and reduces the prospect of financial loss.

To better appreciate risk management, it is recommended that you consult Australian Standard, AS4360 and Handbook 246 (2002) Guidelines for Managing Risk in Sport and Recreation.

To identify risk, you should first have a clear understanding of the environment in which your asset operates and a strategic view of factors that could impact on your operation. This would include but not be limited to:

- The commercial or community environment in which the organisation operates;
- An appreciation of the relevant stakeholders; and
- The application of a SWOT (strengths, weaknesses, opportunities and threats) analysis.

Once you have done this, you will gain a clear understanding of your organisation's goals, objectives and strategies. You will further understand your organisation's capabilities and limitations and will be in a better position to develop strategies to address each area of concern identified.

Undertaking this approach will identify a series of risks to your organisation.

Once identified, you should assess the likelihood of the risk in terms of occurrence and the consequences associated with the risk occurring.

The three primary stages of risk management are:

- Identification of areas of risk;
- Assessment of the risk; and
- Treatment of the risk.

Your organisation should also develop and maintain a risk register that would include:

- The risk itself;
- For each risk identified, the consequences of an event happening and its likelihood;
- For each risk identified, the adequacy of existing controls;
- Likelihood rating;
- Consequences rating;
- Level of risk (treated); and
- Risk priority.

Having identified and categorised each risk, you then need to monitor and treat it. Adopting the following steps will help this process:

- Assign responsibilities for actions;
- Accountabilities for activities;
- Establish performance criteria;
- Establish time frames; and
- Establish procedures for monitoring.

See Appendix C for a detailed risk management procedure.

This process should be closely aligned to the performance of an asset or facility. It is important to monitor risks and the effectiveness of risk treatment plans regularly.

The frequency will depend on the type of risk.

Outcome

An effective internal control structure that provides the framework to improve asset management. Without it there is limited scope for informed decision-making or implementation of management's intentions.

5.0 Disposal

An effective asset disposal framework should include alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets. Alternatives should be evaluated in cost-benefit terms.

PRODUCT

A plan that sets out the reasons; time frame; method; and expected proceeds for the disposal of an asset.

KEY SUCCESS FACTORS

- Under-utilised and under-performing assets are identified in a systematic review process;
- Critical examination of reasons for under-utilisation or poor performance and corrective action is taken or a disposal decision is made;
- Analysis of disposal methods considers the potential market value, the location and volume of assets, the ability to support other government programs, and environmental implications; and
- Regular evaluation of disposal performance.

PRINCIPAL ISSUES

5.1 Disposal plan – redevelop, refurbish or dispose

Once an asset or facility has reached the end of its functional or physical life you will have to decide whether to dispose or decommission, update or replace it. Each has financial and organisational implications.

The following components should be considered:

- Retirement cost impacts;
- Environmental analysis;
- Occupational Safety and Health (OS&H) analysis;
- Replacement or renewal scheme;
- Disposal salvage value; and
- Redeployment or retraining of employees.

Retirement cost impacts

You must carefully consider how you will retire or dispose of an asset if the service it provides is to be ongoing.

In cases where you have decided on replacement, you should develop a project plan or business case to smooth the progress of the decommissioning or disposal, and the seamless provision of a new or refurbished facility.

Environmental analysis

You may be required to undertake an environmental analysis of the disposal of an asset or facility. This may involve the physical structure and the materials or components that may be considered detrimental to the environment such as asbestos sheeting.

There may also be environmental issues that require the site itself to undergo remediation as a consequence of the facility being decommissioned.

Occupational Safety and Health Analysis

This level of analysis looks at the potential for impacts on workers involved in the decommissioning, staff or the surrounding community during the decommissioning of an asset or facility.

This would be the case in the decommissioning of a chemical plant, a power generation plant or some aspects of an aquatic facility.

Replacement or renewal scheme

Replacing an asset may result in new opportunities for a facility other than demolition. There may be scope for it to be used for something else.

Recent examples in the metropolitan area include converting former lawn bowling facilities into community centres and parks for use by the surrounding residents.

Outcome

Effective management of the disposal process will minimise holding surplus and under-performing assets and will maximise return to the owner.

6.0 Glossary of Terms

Benchmarking	A tool for continuous improvement that involves quantifying internal performance and then comparing performance against an external group.
Business case	A process that studies issues including requirements, definition of current baseline, risk allocation and management, knowledge management and how to maintain control, methods of service delivery, human resources and costs/benefits. Also referred to as an acquisition strategy or contract strategy.
Contract	An agreement entered into between two or more parties, which involves an exchange of specific goods and or services for specified financial reimbursement or other considerations. The terms of the agreement are usually set out in writing, and the signing of the contract creates specific legal obligations. However, verbal contracts can be formal and are enforceable.
Facility management	A business practice that optimises people, process, assets and the work environment to support the delivery of a facility owner's business objectives. (Facility Management Association)
Intellectual property	Includes patents, registered design, trademarks or names, copyright and other protected rights.
Key performance indicators (KPIs)	Measures of performance utilising indices derived from specific measurements of data relating to each key result area. Indicators are concerned with variables such as efficiency, effectiveness and financial return and are a subset of KRAs.
Key result area (KRAs)	Linked to the strategic planning process is a series identified important outcomes formulated to deliver upon organisational business plans.
Plant	A piece of physical machinery that forms part of a facility.
Risk Management	The culture, processes and structures directed towards the effective management of potential opportunities and diverse effects.
Service level agreement (SLA)	These are either internal (e.g. between a facilities department and its customers) or external (between client and service provider). SLAs usually specify the outputs or outcomes that are required, including conditions, incentives and penalties.
Stakeholders	Parties with an interest or who are affected by an outcome, such as shareholders, customers, clients, facility departments and service providers.
Tendering	The process of compiling documents such as conditions of contract and specifications, the requesting of proposals from service providers, the preparation of tenders and the evaluation, negotiation and award of contract.
Value management	A structured process that seeks to ensure that all necessary functions of a project are provided at the lowest cost, while maintaining required levels of quality.

Appendices

Example: Service Levels

KRA	KEY RESULT AREA	DESCRIPTION	SAMPLE KPI
1	Asset management	Assets are functional, fit for purpose and meet the desired standard	Condition assessment; Maintenance and replacement plans; %PM vs CM; plant availability and reliability
2	Response to all issues	Facilities Department responds to all issues and requests in a timely manner	Response times; Completion ratio; Outstanding work.
3	Communication and reporting	Facilities Department discusses with Customers their business needs and reports monthly to Customers and Management	Formal customer contact; Regular monthly updates to Customers and Management
4	Issue resolution	Facilities Department endeavours to resolve issues in a timely manner	Issues identified and resolved on time; Report outstanding issues; Extent of Industrial Unrest
5	Cost	Services are provided in a cost effective manner including best use of resources	$/m^2; $/service; Life cycle cost plans; maintenance cost as a proportion (%) of the replacement cost; reduced direct workforce numbers; energy cost/consumption per m^2; Expenditure YTD compared to Budget; Mgmt Fees as a % of maintenance and capital costs;
6	Customer satisfaction	Taking into consideration budget and resource constraints customers level of satisfaction with the service	Improved customer service demonstrated through customer survey results; security; cleaning; image; aestethics; availability
7	Safety	Safety issues are minimised, compliance with legislation	OSH plan developed and reported upon; Number of incidents; Lost Time Frequency

BUILDING MAINTENANCE SERVICES

Service Level Agreement

SCOPE OF THE SERVICE

The (*COMPANY*) will provide support to (*CLIENT*) in respect of all works required by the organisation, which are to be funded from the client's delegated budget or other funding sources. This service is described in further detail in the Definition of the Service. In addition to repairs and maintenance the service will offer the client a range of premises related contracts and offer advice and information on premises related matters, particularly to support the organisation in the discharge of its statutory responsibilities.

The Service will also work to integrate client work and plans with Local Authority and Government plans, initiatives and targets.

The (*COMPANY*) has a number of experienced Facility Managers who each currently have day to day responsibility for general maintenance matters at designated premises. They will also draw up schemes for general maintenance contracts, minor works alterations and produce schedules for works, eg external repairs and painting, minor roof repairs and other property requirements and liaise on behalf of premises managers with external agencies eg Fire Authority, Gas, Water and Electricity Boards etc. The staff of the (*COMPANY*) offer advice and support on all premises related matters. Administrative Support in the section manages a range of contracts to premises and maintains records of statutory requirements eg Asset Management Plans and upgrading plans of premises, as well as the routine ordering of works etc.

It is anticipated that the above service will be provided on a 'fixed cost' basis which would allow full access to, and support from the (*COMPANY)* staff as outlined above with the following exceptions:

- Costs of Planning Applications, Building Control approvals, other specialist advice eg specialist asbestos checks, structural engineer reports. Specialist advice to be sourced by the Facilities Section or determined by the client.
- Where there was an external cost eg an external specialist or a removal company, expenditure would only be committed with the prior approval of the client.
- A separate service agreement will be put in place for Safety and provided by staff working alongside and integrated with the Building Support staff.

Purpose of the Service

"To provide a quality support service based on individual client needs, and to work in partnership with the client to develop safe, high quality facilities."

This will be achieved by offering practicable and unbiased advice on premises matters, the preparation and ordering of works and the close monitoring of projects.

DEFINITION OF THE SERVICE

Service levels are described as follows:

- A day to day response service to premises repairs requested by the client and/or identified by the Facilities Manager, including authorisation by client and ordering of works either using the Government/Council approved contractors, contractors nominated by the client or a combination of both, as decided by the client.

- Raise orders for works, ensure execution of works and completion of works to a satisfactory standard with the client. Snag work and follow up work not completed to the required standard with the contractors involved, prior to payment, to the satisfaction of the client.

- Endeavour to ensure that works are carried out in the timescale required by the client or by nature of the work required and that materials used and methods of working meet current regulations and are appropriate to the type of facility.

- Ensure that the authorisation of payments against the client's budget is done with the knowledge and prior approval of the client's nominated representative/s.

- Respond to individual requests for additional information and advice from the client's staff and via approved request mechanisms. All revised condition data to be incorporated into the process of the updating of the *(COMPANY)* Asset Management Plan.

For works other than routine day to day repairs:

a) Offer advice and guideline costings to the client in respect of a range of works, for example:

- Internal decoration;
- Flooring renewal;
- Electrical alterations/additions;
- Internal alterations;
- External painting and repairs;
- External surfacing;
- Pointing;
- Roofing repairs;
- Structural condition;
- Drainage Works
- Glazing
- Fencing
- Proposed changes of room use;
- Fire Precautions (OSH Regulations);
- Current Building Regulations;
- Planning Regulations;
- Construction Regulations;
- Matters concerning clients heating and plant;
- Removal of asbestos;

b) In respect of the works listed above the (*COMPANY)* can produce specifications and estimates for such works, including liaison (with the prior agreement of the client) if required, with other contractors, invite formal tenders and allocate works as requested by the client. The service would supervise the execution of such works, advise on technical standards and monitor work to completion, including snagging.

- Respond to the Client representative or on their behalf as requested in respect of issues raised by other staff or client customers.

- Assist the Client in the preparation of Building maintenance priority lists for works, both delegated and non delegated and the planning of such works, taking account of client closure periods and co-ordinating works with the day to day operations of the client.

- Provide an advice and support service in respect of specialist equipment and its maintenance and costings, for example, of extensive plant renewal. Arrange and supervise removals and disposal of equipment upon request.

- Provide the opportunity to participate, upon request, in a range of contracts/service agreements related to equipment and services which the *(COMPANY)* currently provides to all sites, e.g. disposal of waste, chemical disposal, annual service of PE equipment, annual servicing of fire equipment, mechanical services, cleaning, security. Monitor such contracts and ensure an appropriate level of service, following up any complaints and queries.

- Provide advice and support to the Client and staff in respect of Service and Inspection reports and other safety reports upon request eg. mechanical/fire.

- Support the client in respect of the execution of large scale capital works, liaising with other organisations and companies as required.

CUSTOMER PROFILE

The service is intended to support clients in the widest sense in their continuing efforts to raise standards and provide high quality facilities. The key mechanisms for meeting this target will be the continuing development and maintenance of a supportive working relationship with client staff.

OPERATIONAL PROCEDURES AND GUIDELINES

It is envisaged that the Building Services delivery would be by means of the measures outlined below and by the staff outlined in Scope of the Service.

- A designated Facility Manager and backup Facility Manager for the client.

- Regular visits by the Facility Managers, Engineers and other staff as pre-arranged with the client. More frequent visits related to emergencies and work in progress will be made as required and as agreed with the client.

Visits by the Facility Managers and Engineers to prepare schedules and estimates and to provide advice. Requests by the client for such a visit will be responded to within 24 hours.

Provision of a repair/request reporting service and an advice/support service by telephone form 8.30am to 5.00pm. Outside the working day response service to emergency situations will be provided by senior officers, call out being made via the designated call process.

- Initial response to complaints/queries will be within 24 hours.
- Liaison as required with contractors/support staff engaged on capital funded works, major refurbishments, boiler/heating maintenance and consultants.
- Access to Facilities information support which includes (*COMPANY)* Policy and documentation which provides detailed information on a wide variety of products and Building Regulations. Access to be via Facility Managers or direct by member of client staff by arrangement.
- Scrutiny of client (if requested) and follow up of Building issues. A five day initial response limit to requests from the Client for additional information to respond to individual queries/complaints/ incidents concerning Building issues raised.
- Liaison with other organisations in terms of service provision and performance.

PERFORMANCE CRITERIA

In summary, Service Levels offer:

- A 24 hour, 365 day service with stated response times.
- A service which combines technical support from building professionals with an understanding of the specific needs of the facility environment.
- An established service which is clearly defined, delivered by a small team and gives the client total cover, with clear cut off points when additional expenditure would be involved in using more specialist input, e.g. architectural and structural services and asbestos removal. This service ensures that such expenditure is not incurred unnecessarily for routine work and it allows the client to plan more easily in terms of anticipated expenditure in respect of Building Services.
- A service where the staff who initiate repairs, respond to requests for repairs, plan maintenance, draw up schedules and advise the client on priorities and costs, are totally independent of the contractors carrying out the work. The advice is impartial and without bias in terms of securing work or highlighting particular types of work. In doing this, the systems offered meet common financial standards for public bodies.
- A service where a number of the staff involved are familiar with the premises at the client and the needs of the organisation. In addition, the service is concerned with education premises only, with no other demands. The service offers named contacts, guaranteed responses, and a friendly, professional and co-operative service. All staff meet statutory requirements in respect of Access to client premises and or child activities.

PLANNING, MONITORING AND EVALUATION

The Facilities staff are accountable to the Directorate of the *(COMPANY)*, in addition to the accountability to clients through the service provision described above. In addition, the Facilities Section will undertake to monitor the service delivery, and will as now be open to Internal and External Auditors scrutiny.

DISRUPTION OF SERVICE

Should the client consider that the above service is not being delivered correctly it can request an explanation and remedial action. Day to day routine issues and problems should be raised with the appropriate inspector in the first instance and to the service managers if they cannot be resolved quickly to the satisfaction of the client. Should the client continue to be dissatisfied with the service delivery, a formal complaint should be made to the relevant (*COMPANY)* Director.

BUILDING SERVICES	SERVICE LEVEL
Designated Facility Manager (FM) and back up FM for the client.	✔
Programmed visits by Facility Manager, as pre-arranged with the client.	✔
Advice re: repairs, ordering of works, ensuring execution and completion of works, snagging, follow up in respect of outstanding works, and authorised payment to contractor/s. Covers all client funded repairs from $1 upwards. Reporting service 8.30am–5.00pm Monday to Friday.	✔
Offer advice on a range of building maintenance matters and produce costing, specification and arrange works as required e.g. flooring, roofing, drainage, fencing etc.	✔
Offer advice, produce specification, costs and tender for minor works alterations. Obtain relevant planning permissions, Building Control approvals, structural engineers reports as required. Arrange for works to be carried out and supervise through to completion.	✔
Provide advice in respect of clients' responsibilities under relevant legislation.	✔
Provide advice in respect of clients' responsibilities under other Government policies.	✔
Assist Client in the preparation of building maintenance priority lists for works, both delegated and non-delegated.	✔
Response to the client or, on their behalf, as requested, to issues raised by other staff or client customers.	✔
Provide advice and support service in respect of specialist equipment and its maintenance and castings, e.g. extensive plant renewal. Arrange and supervise removals and disposal of equipment upon request.	✔

BUILDING SERVICES	SERVICE LEVEL A
Provide the opportunity to participate in a range of contract/ service agreements related to equipment maintenance and services provision to clients e.g. fire equipment, PE equipment.	✔
Provide advice and support to clients in respect of Fire Service Inspections and Fire Service reports on client premises.	✔
Support the client in respect of the execution of large scale capital works, liaising with other organisations and companies, as required.	✔
Access to Facilities Section information support, including COMPANY Policy and Guidance documents, building products and regulatory frameworks.	✔
Scrutiny of client minutes (if requested) and follow up of building issues.	✔
Liaison with other organisations in respect of premises and site matters delegated to clients.	✔
Provide up-dated Condition information as required to clients for those areas of building maintenance.	✔
Advice in respect of asbestos removal which is the client's responsibility.	✔
Outside working hours – a response service to major client emergencies.	✔
Support to client in implementing client closure following major emergencies including additional telephone support.	✔
Liaison with other COMPANY staff and contractors as follow up to an emergency/major failure e.g. links with caretaking/ cleaning/security.	✔
Liaise with utility suppliers in respect of service to clients.	✔
Liaise with Environmental Health in respect of kitchen works.	✔

Risky Business — A Club Guide to Risk Management

What is Risk Management?

The Australian/New Zealand Standard for Risk Management (AS/NZS 4360) defines risk management as:

"The culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects."

What is Risk?

The Australian/New Zealand Standard for Risk Management (AS/NZS 4360) defines risk as:

"The chance of something happening that will have an impact upon objectives. It is measured in terms of likelihood and consequences."

RISK REDUCTION

The Australian/New Zealand Standard for Risk Management (AS/NZS 4360) defines risk reduction as:

"A selective application of appropriate techniques and management principles to reduce either likelihood of an occurrence or its consequence or both."

RISK TRANSFER

The Australian/New Zealand Standard for Risk Management (AS/NZS 4360) defines risk transfer as:

"Shifting responsibility or burden for loss to another party through legislation, contract, insurance or other means."

RISK ACCEPTANCE

The Australian/New Zealand Standard for Risk Management (AS/NZS 4360) defines risk acceptance as:

"An informed decision not to become involved in a risk situation."

With Australian sport and recreation organisations facing the increasing risk of litigation many organisations are recognising the need to provide protection for their volunteers, members and participants.

Identifying potential risk and creating a risk management policy for your club, group or event can have a number of subsequent benefits. These can include:

- Good business and management practice
- Assistance with strategic planning
- Reducing unexpected and costly surprises; and
- More effective and efficient allocation of resources.

Why do we need to manage Risk?

- Helps you to clearly define insurance needs
- Compliance with regulatory requirements
- Assists in preparation for auditing
- Lessening risk may encourage more people to participate in your activity
- Better results from projects and programs
- Better information for decision making
- Balancing opportunity and risk.

When do we need to manage risks?

ALL THE TIME

Risk management is an ongoing process applied to all aspects of your operations. Any new project, event or competition should have a risk assessment completed.

Risk management is a five step process

The five steps are:

1. Establishing the context
2. Identify risk
3. Assess risks
4. Treat risks
5. Ongoing monitoring and review.

1 ESTABLISHING THE CONTEXT

- The scope of risk management within your organisation
- The aims and objectives of your own risk management program in relation to your organisation
- The Who, What, When, How and of course – with what resources?
- Determine criteria for treating risks
- Define the extent and comprehensiveness of the risk management activities
- Define the project or activity for which you are going to identify risks
- Define your risk assessment criteria table
- Define your risk acceptance criteria.

2 RISK IDENTIFICATION

Potential risks can be identified through various methods such as:

- Experience and records
- Brainstorming
- Systems analysis
- Personal reports
- Audit and other recommendations
- What can happen – list events that might happen
- How and why it can happen – list the possible causes and scenarios.

3 RISK ASSESSMENT

To assess the likelihood of potential risks:

- Likelihood – used as a description of probability and frequency
- Consequence – the outcome of an event or situation could be a loss, injury, disadvantage or gain
- Look at the adequacy of existing risk management strategies
- How likely is an identified risk to occur
- What are the consequences if it occurs
- Decide which risks are to be treated or accepted.

The Risk Management Strategy Grid and Risk Assessment and Acceptance Table on page 6, may help you to determine the likelihood, possible consequences and levels of potential risks.

4 RISK TREATMENT AND CONTROL

To treat and control potential risks:

- Reduce the likelihood
- Reduce the consequences
- Transfer the risk i.e. use of insurance
- Accept the risk
- Avoid the risk.

The Risk Management Template and Action Plan on page 30, may help you develop a risk management action plan for your organisation.

5 MONITORING AND REVIEW

Potential risks can be monitored and reviewed through:

- Risk reviews
- Claims performance reports
- Audits (internal and external) reporting
- Progress of the Risk Treatment Plan implementation.

WHAT AREAS NEED TO BE TREATED BY PROCESS?

Identify key function areas as:

STRATEGIC

Those risks associated with the high level goals, objectives, and strategies of the organisation and its divisions. These strategic risks are most relevant to associations or large clubs.

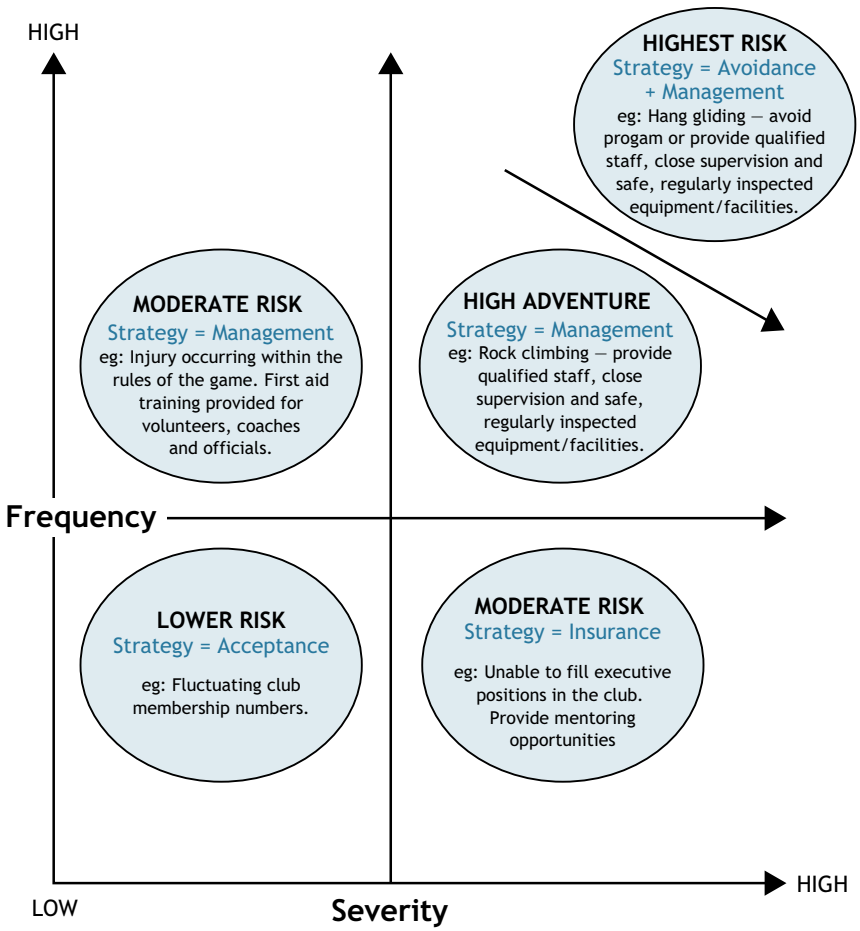
GOVERNANCE/OPERATIONAL

Those risks associated with the functions of the organisation performed on a daily basis. Finance, decision making, marketing and promotion and the administrative areas of your club or group.

PROJECT/THE EVENT

The risks associated with a specific project event or competition including all phases of the event. Safety, public liability, property loss/damage, competition / competitor services.

In establishing the context of the risk review define the extent of the review, whether you want to limit it to certain aspects such as safety or public liability or conducting the review looking at the entire project, event or competition.



RISK MANAGEMENT TEMPLATE

PROJECT: Describe the activity /function /strategy. eg: Financial management processes for the association	
THE RISK: What can happen? How it can happen. eg: Inadequate financial management processes and the Association becomes insolvent	
CONTROLS: What controls will be used in this activity? ☐ Excellent ☐ Adequate ☐ Inadequate eg: Monthly financial statements provided	
LIKELIHOOD: What is the likelihood of this event occurring? To rate, see Table D1 (opposite) eg: Likely	
CONSEQUENCES: What would be the consequences if the event occurred? To rate, see Table D2 (opposite) eg: High financial loss	
LEVEL OF RISK: What is the level of risk? To rate, see Table D3 eg: Significant risk. Senior management action needed	

RISK ASSESSMENT AND ACCEPTANCE TABLE

LIKELIHOOD: What is the likelihood of potential risk occurring?

TABLE D1

Descriptor	*Description*
Rare	The event may only occur in exceptional circumstances
Unlikely	The event could occur at some time
Moderate	The event will probably occur at some time
Likely	The event will probably occur in most circumstances
Almost certain	The event is expected to occur in most circumstances

CONSEQUENCES: What is the outcome of an event or situation?

TABLE D2

Descriptor	*Description*
Insignificant	No injuries, low financial loss
Minor	First aid treatment, medium financial loss
Moderate	Medical treatment required, high financial loss
Major	Extensive injuries, major financial loss
Catastrophic	Death, huge financial loss

LEVEL OF RISKS

TABLE D3

Likelihood ***Consequences***

	Insignificant	*Minor*	*Moderate*	*Major*	*Catastrophic*
Rare	**L**	**L**	**M**	**S**	**S**
Unlikely	**L**	**L**	**M**	**S**	**H**
Moderate	**L**	**M**	**S**	**H**	**H**
Likely	**M**	**S**	**S**	**H**	**H**
Almost certain	**M**	**S**	**H**	**H**	**H**

Legend

H	HIGH RISK	Detailed research and management plan
S	SIGNIFICANT RISK	Senior management action needed
M	MEDIUM RISK	Management responsibility must be specified
L	LOW RISK	Manage by routine procedures

RISK MANAGEMENT ACTION PLAN

Actions

Tasks to reduce your club's risk

When?

Set some dates

Who will do these tasks?

Comments

BUILDING CONDITION ASSESSMENT (BCA)

Draft Methodology

GENERAL

The inspector will perform an evaluation at each of the facilities identified by the client using the standard methodology and templates (samples provided with this document). The evaluation will provide an independent and documented overview of infrastructure conditions in a simple concise easy to understand report. The following facilities are included and a schedule for visits to each will be determined in coordination with the client:

1. _____
2. _____
3. _____
4. _____
5. _____

The following are typical expectations for each Assessment:

A. A **Building Condition Assessment form** covering each major building system. Each system will be rated with a suggested rating as per the template. Estimates of remaining functional life span and costs to correct the deficiencies of each major system shall be provided in the summary. A comparison of the correction cost vs. replacement cost for each major system with a single number cost ratio shall be provided where deemed necessary. Total building correction cost should also be compared with total building replacement cost, providing a total comparative cost ratio.

B. A **Site Evaluation form** similar to the building form.

C. A **Summary form** listing deficiencies by category and recommendations including individual cost for each element/location and totals for each facility. Significant deficiencies shall be listed individually and prioritised. In addition any common problems across the facility will be identified.

Each facility evaluation will include a 1–2 day site visit, possibly by a multi-disciplinary contractor team. Members will include professional and experienced staff with extensive knowledge in their particular discipline. Required disciplines may include architecture (with fire and safety expertise), mechanical (with plumbing expertise), electrical, structural and facility management.

Much of the data for this report will be gained from personal inspection, from interviews with the appropriate client, contractors and/or facility management staff and the analysis of their knowledge and familiarity of facility systems. Information will also be gathered from a desktop study of facility as-built drawings (especially for structural and site utilities).

The Client will provide the following:

A. A list of buildings to be assessed, their current function and total gross/net square meterage.

B. Personnel with the most knowledge of, and management responsibility for, the existing systems as tour guides and for interview.

C. Any available lists of recent and projected projects.

D. Most recent maintenance plant reports.

E. Any significant maintenance or engineering studies

F. A desk from which to work.

DELIVERABLES

Within a maximum of two weeks after the visit to each Facility the contractor shall provide two (2) copies of the draft BCA to the clients representative. When comments are received from the client, the contractor and client shall discuss and resolve any differences. All agreed upon comments will be included in a final draft report. The contractor shall review the final draft report to ensure that the condition assessment of systems is consistent across the facilities.

A final report will be delivered to the client within four weeks of the resolution of the final comments for the last facility inspected. The final report will be in color for both electronic and hard copies. All electronic documentation will be accomplished using *Microsoft Excel* and *Microsoft Word*. The contractor will demonstrate on client computer equipment that the electronic version is editable and printable. The client shall be provided with two electronic versions on CD-ROM.

Specific Scope for each Discipline

Architectural System: BCA shall include a physical inspection of all Architectural components, including roofs, exterior wall assemblies, windows, interior finishes/doors, life safety requirements, handicapped accessibility features, fixed equipment and signage/wayfinding. Based on the physical inspection, client input, and available client data, existing conditions will be fully documented as per client's format. Remaining functional life spans and a short narrative description for each component shall be provided.

Heating Ventilating and Air Conditioning (HVAC) System(s): BCA shall include a physical inspection of all HVAC systems including air-handlers, packaged equipment, room terminal units, refrigeration equipment, piping, valves, ductwork, room air distribution, controls, indoor air quality issues and other equipment and system components essential for the operation of the HVAC systems. Inspection, testing, and calibration data, maintenance and repair histories shall be reviewed and facility personnel interviewed. Age, condition, capacity deficiencies, equipment/system efficiency, equipment controls shall be documented. Life expectancy, based on sample data from the client and educated analysis, shall be determined. This information shall be used to evaluate the equipment's ability to support the function that it is currently serving. Any deficiency in capacities, ASHRAE system deficiencies, and differences from Australian Standards or other national code requirements, as well as significant deficiencies from client criteria for similar functional areas and equipment requirements shall be identified. Any piping flow problems, deteriorated piping problems, pumping problems, etc. shall also be identified.

Chiller Plant and Distribution System: BCA shall include a physical inspection of the chiller plant and related systems including refrigeration equipment, cooling towers and condenser water pumping systems, primary and secondary chilled water pumping systems, condenser water system, valves, other equipment and system components essential for the operation of the Chiller system. Inspection, testing, and calibration data, maintenance and repair histories shall be reviewed and facility personnel shall be interviewed. Age, condition, capacity deficiencies, equipment/system efficiency and equipment controls shall be documented. Life expectancy, based on sample data from the client and educated analysis, shall be determined. This information shall be used to evaluate the equipment's ability to support the function that it is currently serving. Any deficiency in capacities, ASHRAE system/standards deficiencies, and differences from Australian Standards or other national code requirements, as well as significant deficiencies from client criteria for similar functional equipment requirements shall be identified. Any piping flow problems, deteriorated piping problems, pumping problems etc. shall also be identified.

Automatic Transport Systems: BCA shall include a physical inspection of all vertical transport systems. Inspection, testing and calibration data, maintenance and repair histories shall be reviewed and facility personnel shall be interviewed. Age, condition, capacity deficiencies, speed, travel controls, etc. shall be documented. Life expectancy, based on sample data from the client and educated analysis, shall be determined. This information shall be used to evaluate the equipment's ability to support current and short-term peak traffic loads. The condition of traveling cables, controllers, control systems, hydraulic jack units, pump units, guiderails, all operating devices, independent and fire service functions, car frames, car platforms, car enclosures electric interlocks, intercom or telephone operations, motors and handicap accessibility shall be reviewed. Any differences from Australian Standards or other national code requirements as well as significant deficiencies from client criteria for similar functional equipment requirements shall also be identified.

Plumbing, Gas, and Fire Sprinkler Systems: BCA shall include a general inspection of storm water, domestic cold water, domestic hot water and domestic hot water recirculation systems, domestic hot water heaters, solar hot water, gas lines, geothermal heating, compressed air, reverse osmosis plant, vacuum systems and sprinkler/hydrant systems. Inspection, testing, and calibration data, maintenance and repair histories shall be reviewed and facility personnel shall be interviewed. Age, condition, capacity deficiencies, equipment/system efficiency, control of equipment shall be documented. Life expectancy, based on sample data from the client and educated analysis, shall be determined. This information shall be used to evaluate the equipment's ability to support the function that it is currently serving. Any deficiency in capacities, compliance with Australian Standards, Essential Services legislation, national plumbing code deficiencies and other national code requirements, as well as significant deficiencies from client criteria for similar functional equipment requirements shall also be identified.

Electrical, Lighting, Communications and Signalling Systems: BCA shall include a physical inspection of all electrical, lighting, communications and signaling systems including incoming electrical service and switchgear, incoming telephone service and switch, main Emergency Warning and Inter-communication system (EWIS) including fire alarm system, site lighting and security systems, secondary distribution system (generator, transformer, secondary service equipment, risers, panelboards and branch circuit wiring), essential electrical system (all related equipment including fuel oil tanks), interior lighting and power, interior fire alarm system, interior telephone, data and communications systems (TV, intercom, radio), lightning protection system and electrical, signal and telephone closets. Recent maintenance and testing reports and repair histories on electrical equipment shall be reviewed and any deficiencies documented. Age, condition and any capacity deficiencies for all systems shall be documented. Life expectancies, based on sample data from the client or the consultant's educated analysis, shall be determined. This information shall be used to evaluate the equipment's ability to support the function that it is currently serving as well as its capability to continue to function in the future. Any deficiencies from Australian Standards, National Electrical Code or any other state/national code deviations or violations as well as any significant deviations from client criteria for similar systems or equipment requirements shall be identified. The major portion of the above data shall be collected by personal inspection of the equipment or systems with the assistance of the appropriate client or contractor staff.

Structural Systems: BCA shall include a visual inspection of the building to detect any settlement or cracks in the masonry etc. The type of foundation, structural floor system (including vertical members) shall be documented at some stage. Building compliance with seismic/wind load requirements shall be determined. Any deficiencies in the structural system that can cause life-threatening situations shall be identified. Any settlement cracks in the stairs, sidewalls, basement walls or retaining walls, damaged floor systems and vertical members (especially in timber buildings) shall be inspected and evaluated.

Site Access: BCA shall include a physical inspection of all site features including roads, parking, curb and gutters, walks, exterior accessibility (including exterior steps), wayfinding (exterior signage), fencing, and landscaping. Deficiencies or deterioration of site features and the remaining life expectancy shall be documented. The costs of replacement or repairs that are necessary to correct site features shall be determined. All underground site utilities such as water, storm water, sanitary, and natural gas systems shall be evaluated. The source(s) of the utilities, the age and condition of the pipe mains, inlets, and fire hydrants, outflow of storm and sanitary lines and remaining life expectancy shall be documented. Site electrical and steam distribution (including heating oil system) shall be included under their specific headings.

Steam Generation Systems: BCA shall include a physical inspection of all boiler plant equipment including boilers, burners, energy recovery devices, burner controls, combustion controls, instruments, condensate storage tank, water and oil pumps, chemical treatment systems, water softeners, water dealkalyzers, make-up water system, blowoff tank, stacks or chimney and breeching, piping system, fuel oil tanks. Boiler inspector's reports on the boilers and deaerator shall be reviewed. The contractor shall interview facility personnel and shall document the age, condition, capacity and turndown deficiencies, equipment/system efficiencies. All components shall be reviewed for compliance with current Australian Standards or other national/state code requirements and recommendations. Burner compliance with local and national emissions limits, if any, shall be verified. Instrumentation systems shall be reviewed to determine if boiler/burner performance and plant output are being properly monitored. Fuel oil tanks and piping shall be evaluated for proper design and for protection against spills and leaks. Fuel oil installations shall be reviewed for compliance with local and state EPA requirements. Any piping flow problems, deteriorated piping, and/or pumping problems shall be identified. Life expectancy, based on sample data from client and the contractors educated analysis, shall be determined. This information shall be used to evaluate the equipment's ability to support the function that it is currently serving as well as any programmed change in functions.

FACILITY:

ASSESSOR'S NAME: CLIENT REPRESENTATIVE:

FACILITY MANAGER: ASSESSMENT DATE:

Sport Specific Condition Assessment

ELEMENT NAME	ELEMENT TYPE	LOCATION	ASSET NUMBER		CONDITION RATING	COMMENTS
Basketball – backboards						
Basketball – court surface						
Netball court surface						
Netball – poles and rims						
Swimming Pool pumps						
Swimming Pool – Geothermal heating						
Swimming Pool– pool cover						
Swimming Pool – Chlorinator						
Swimming Pool – sand/other filter						
Grassed areas including reserve/s						
External Spectator seating – plastic individual						
External Spectator seating – bench						
Bowiling rink surface – grass						
Bowling rink – guttering						
Tennis Court surface – grass						
Tennis Court surface – synthetic						
Tennis Court surface – Plexipave / Hardcourt						
Tennis Court surface – clay						
Tennis Court netposts, nets and umpires chairs						
Cricket – Turf Wicket including markings						
Cricket – Synthetic Wicket including markings						
Cricket – practice nets (turf) including net and framework						
Cricket – practice nets (synthetic) including net and framework						
Football – Goalposts						
Lacrosse – Goalposts and nets						
Soccer – Goalposts and nets (including fitting in ground)						
Polocross – Goalposts and nets						
Rugby – Goalposts (including fittings in ground)						
Badminton – Netposts and nets						
Volleyball – Netposts and nets						
Hockey Field Surface – grass						
Hockey Field Surface – synthetic						
Hockey – goals						
Reserve / oval surface						
Squash – glazing or other wall surfaces						
Floor Coverings – tiled						
Floor Coverings – Broadloom carpet						
Floor Coverings – carpet tiles						
Floor Coverings – standard timber						
Floor Coverings – sprung timber						
Floor Covering – synthetic surface						

The following appears in a 'drop-down' box in Microsoft Excel

Element Type	Condition Rating
court pool seating netting frame/s ancillary fittings blanket pump fixtures goal surface	excellent good fair poor inoperative

BUILDING CONDITION ASSESSMENT

Client's Site Level: Consolidated Feedback Report

This is a summary of some key areas that should be assessed in your facility/facilities to help identify and plan for routine and preventative maintenance whilst minimising damage from any number of emergency situations. The client should undertake a brief inspection, documenting their views on the attached forms. These forms will form part of the interview process between client and inspector.

A risk assessment should describe conditions/ concerns within each of the following areas, as well as actions to be taken to limit exposure.

Drainage:

- Condition of eaves, gutters, downpipes and drains
- Extent of services (are there sufficient numbers)
- Check that water is directed away from the building/facility and draining properly
- Check sewerage is draining and that pumping systems are operating correctly

Water Services:

- Check for pipe leaks or other plumbing problems(pressure test if necessary)
- Ensure mains shut-off valves easily identified and secure from unauthorised tampering
- Check pump location, accessibility and operation
- Ensure location of pipework is known by staff/contractors and maintain updated drawings

Architectural:

- Building fabric (brick, tilt-up concrete, timber frame, other) – check for defects in surfaces and joints
- Check roof (tile/metal deck)
- Check condition of glazing, sliding door sets, revolving doors, windows, hinged doors, balustrades
- Assess compliance with relevant legislation (Acts, Codes of Practice, Australian Standards, Industry codes, Local government regulations)

Fire Services:

- Inspect fire extinguishers for location, number and check maintenance records
- Inspect fire hydrants and pump rooms for leaks and maintenance records
- Check fire booster pumps condition
- Check sprinkler heads
- Inspect fire indicator panel (FIP) – records and compliance
- Inspect fire stairs for compliance
- Inspect and test smoke exhaust systems
- Verify access available for fire and emergency services

Communications:

- Check emergency warning and inter-communication system testing records and operation
- Check telecommunications: PABX, distribution frames, public address including redundancy systems
- Check information systems services

Heating/Ventilation/Airconditioning (HVAC):

- Verify and document types of systems in place
- Inspect routine maintenance records
- Inspect cooling coils, heating coils, chilled water, heating pipe-work for evidence of leakage or excessive condensation
- Inspect air chambers, coils, fans for evidence of mould growth.
- Undertake IAQ tests

- Check operation of Building Management Control System including reviewing timing of plant operations
- Check for correct procedures and signage such as “Confined Spaces and Hot Work”
- Check necessary plant permits in place and displayed (ie. pressure vessels)

Safety and Health / Security:

- Checks locks, access control systems, alarms, visitor controls, security policies and procedures
- Check interior and exterior security lighting
- Check number and sufficiency of physical security patrols
- Check appropriate emergency contact lists in place and available to staff
- Check emergency procedures are adequate for the facility and types of risk
- Check Occupational Safety and Health policies are adequate for facility
- Check storage facilities for chemicals including signage
- Inspect emergency exits – do they meet regulations in number and distance of travel
- Check emergency access/egress systems are operational and check test records
- Check staff training records
- Check condition of electrical and gas services for compliance (ie. RCD’s)
- Check waste removal systems, policies

Insurance:

- Check necessary policies exist and to appropriate dollar value (ie. Public Liability, Workers Compensation, Professional Indemnity, Volunteers)
- Ensure accurate replacement costs are identified
- Check asset management register

This is not intended to be an exhaustive list of issues to be considered but should prompt thought on specific facilities.

BUILDING CONDITION ASSESSMENT

Client's Site Level: Consolidated Feedback Report

The purpose of this form is to provide an opportunity for the client and/or facility manager to identify and list issues of concern for the attention of the person undertaking the assessment.

FACILITY NAME: BUILDING NUMBER/IDENTIFIER:

BUILDING ADDRESS:

EXTERNAL

COMPONENT	DESCRIPTION
Parking, Footpaths, Paving	
Bores, Grounds reticulation	
Stormwater/drainage	
Power supplies	
Water Supplies	
Gas supplies	
Sewer	
Other items	

Signed: _____ Signed: _____

CLIENT FACILITY MANAGER

Signed: _____

ASSESSOR/INSPECTOR

Date: _____

BUILDING CONDITION ASSESSMENT

Client's Site Level: Consolidated Feedback Report

The purpose of this form is to provide an opportunity for the client and/or facility manager to identify and list issues of concern for the attention of the person undertaking the assessment.

FACILITY NAME: BUILDING NUMBER/IDENTIFIER:

BUILDING ADDRESS:

BUILDING

COMPONENT	DESCRIPTION
Communications, public address, EWIS	
Roof cover	
Roof plumbing	
Sanitary plumbing	
Building fabric(walls and glazing)	
Air conditioning (refrigerated/evaporative)	
Mechanical ventilation	
Electrical	
Heating	
Floorcoverings	
Other items	

Signed: _____ Signed: _____

CLIENT FACILITY MANAGER

Signed: _____ Date: _____

ASSESSOR/INSPECTOR

FACILITY:

ASSESSOR'S NAME: CLIENT REPRESENTATIVE:

FACILITY MANAGER: ASSESSMENT DATE:

Sport Specific Condition Assessment

EXTERNAL SERVICES

ELEMENT NAME	ELEMENT TYPE	LOCATION	ASSET NUMBER		CONDITION RATING	COMMENTS
External Sewer						
External Water Supply						
External Reticulation controller						
External Electricity Supply						
Substation						
External Gas Supply						
External Fire Protection – Booster						
External Fire Protection – Hydrant						
External Lighting						
External Power						
External Telecommunications						
External Public Address						
Lightning Protection						
External Security						
External Paving						
Carparking and kerbs						
Footpaths						

The following appears in a 'drop-down' box in Microsoft Excel

Element Type	Condition Rating
pump	excellent
motor	good
pipework	fair
tank	poor
damper	inoperative
valve	
camera	
boiler	
signage	
lighting	
gates	
ventilation	
monitoring	
water	
electricity	
gas	
diesel	
HVAC	
flooring	

INTERNAL SERVICES

ELEMENT NAME	ELEMENT TYPE	LOCATION	ASSET NUMBER	CONDITION RATING	COMMENTS
Sanitary Plumbing – Sewer pipes					
Sanitary Plumbing – Pumps					
Sanitary Plumbing – Toilet pans and cisterns					
Sanitary Plumbing – Basins					
Water Supply(Cold) – Storage tank					
Water Supply(Cold) – Pipework					
Water Supply(Cold) – Pumps					
Water Supply(hot) – Boilers					
Water Supply(hot) – Solar					
Water Supply(hot) – Solar Panels					
Water Supply(hot) – Circulating pump					
Water Supply(hot) – Pipework					
Gas Services – pipework					
Gas Services – meters					
Gas services – Boiler					
Reverse Osmosis – Tanks					
Reverse Osmosis – Pumps					
Reverse Osmosis – Heating					
HVAC – Chiller 1					
HVAC – Chiller 2					

ELEMENT NAME	ELEMENT TYPE	LOCATION	ASSET NUMBER		CONDITION RATING	COMMENTS
HVAC – Chiller 3						
HVAC – Supply Air Fan 1						
HVAC – Supply Air Fan 2						
HVAC – Supply Air Fan 3						
HVAC – Supply Air Fan 4						
HVAC – Supply Air Fan 5						
HVAC – Supply Air Fan 6						
HVAC – Supply Air Fan 7						
HVAC – Return Air Fan 1						
HVAC – Return Air Fan 2						
HVAC – Return Air Fan 3						
HVAC – Return Air Fan 4						
HVAC – Return Air Fan 5						
HVAC – Chilled Water Pump 1						
HVAC – Chilled Water Pump 2						
HVAC – Chilled Water Pump 3						
HVAC – Condensor Water Pump 1						
HVAC – Condensor Water Pump 2						
HVAC – Condensor Water Pump 3						
HVAC – Humidifier						
HVAC – Air Receiver						
HVAC – Air Dryer						
HVAC – Chilled Water Pipework						
HVAC – Cooling Coils						
HVAC – Heating Coils						
HVAC – Condensor Water Pipework						
HVAC – Cooling Tower 1						
HVAC – Cooling Tower 2						
HVAC – Chilled Water Bypass Valve						
HVAC – Chilled Water Bypass Valve						
HVAC – Variable Speed Drive 1						
HVAC – Variable Speed Drive 2						
HVAC – Variable Speed Drive 3						
HVAC – Split/Packaged Unit 1						
HVAC – Split/Packaged Unit 2						
HVAC – Split/Packaged Unit 3						
HVAC – Split/Packaged Unit 4						
HVAC – Supply Air Filters						
HVAC – Return Air Filters						
HVAC – Outside Air Damper Set 1						
HVAC – Outside Air Damper Set 2						
HVAC – Outside Air Damper Set 3						
HVAC – Outside Air Damper Set 4						
Ventilation – Toilet Exhaust						
Ventilation – Kitchen Exhaust						
Ventilation – Other Exhaust						
Ventilation – Smoke Exhaust						
Fire Protection – Fire Indicator Panel						
Fire Protection – Sprinkler System or other auto systems						
Fire Protection – Hydrants						
Fire Protection – Hose Reels						
Fire Protection – Booster Pumps						
Fire Protection – Jacking Pumps						

ELEMENT NAME	ELEMENT TYPE	LOCATION	ASSET NUMBER		CONDITION RATING	COMMENTS
Fire Protection – Smoke Detectors						
Fire Protection – Thermal Detectors						
Fire Protection – Visual Warning Aids (Strobes)						
Fire Protection – Stairwell Pressurisation						
Fire Protection – Door Release Break Glass						
Light and Power – Main Distribution Panel						
Light and Power – Sub-mains panel 1						
Light and Power – Sub-mains panel 2						
Light and Power – Sub-mains panel 3						
Light and Power – Sub-mains panel 4						
Light and Power – High Voltage (HV) Switchgear						
Light and Power – Transformer 1						
Light and Power – Transformer 2						
Light and Power – Transformer 3						
Light and Power – Low Voltage Switchgear						
Light and Power – Mechanical Services sub-boards						
Light and Power – Essential Services sub-board						
Light and Power – Emergency Generator						
Light and Power – Generator fuel pump/s						
Light and Power – Emergency Lighting Batteries						
Light and Power – Emergency Lighting Transformer						
Light and Power – Emergency Light fittings						
Light and Power – Residual Current Devices (RCD)						
Light and Power – Light Fittings General						
Light and Power – Electric Hand Dryers						
Communications – Emergency Warning System (EWIS)						
Communications – Public Address						
Communications – Alarm bell						
Personal Transport – Lift Car 1						
Personal Transport – Lift Car 2						
Personal Transport – Lift Car 3						
Personal Transport – Lift Car 4						
Personal Transport – Lift Car 5						
Personal Transport – Lift Car 6						
Personal Transport – Escalator						
Other Transport Systems – Dumb waiters						
Specialist Services – Compressed Air Pipework/ fittings						
Specialist Services – Compresso						
Specialist Services – Reverse Osmosis Tanks						
Specialist Services – Reverse Osmosis Pumps						
Specialist Services – Reverse Osmosis Filters						
Specialist Services – Reverse Osmosis Heating						
Specialist Services – Building Management/Access Control System						
Specialist Services – Theatre Staging						
Specialist Services – Stage/Theatre Lighting						
Specialist Services – BioBox Sound Controls						
Specialist Services – Projection Equipment						
Specialist Services – Theatre Step Tread Lighting						
Specialist Services – Theatre Lectern and AMX Controls						
Specialist Services – Theatre Screen Masking including motor						

ELEMENT NAME	ELEMENT TYPE	LOCATION	ASSET NUMBER	CONDITION RATING	COMMENTS
Kitchen Coolrooms					
Storage Coolrooms					
Chemical/Cleaners storerooms					
Kitchen Cooking Equipment					
Security – Access Control Distribution Panels					
Security – Access Control Electric Strikes					
Security – Access Control Door Release panels					
Security – CCTV System (head end equipment and cameras)					
Security – Keyed Locks					
Security – Anti-Theft Devices					
Glass Mirrors					
Floor Coverings – Tiled					
Floor Coverings – Broadloom Carpet					
Floor Coverings – Carpet Tiles					
Floor Coverings – Standard timber					
Floor Coverings – Sprung timber					
Floor Covering – Synthetic surface					

FACILITY:

ASSESSOR'S NAME: CLIENT REPRESENTATIVE:

FACILITY MANAGER: ASSESSMENT DATE:

Condition Assessment

STRUCTURE

ELEMENT NAME	ELEMENT TYPE	LOCATION	ASSET NUMBER		CONDITION RATING	COMMENTS
External Stairs						
External Spectator seating - Concrete						
External Tilt – up concrete wall panels incl expansion joints						
Internal Tilt – up concrete panels including expansion joints						
Substation structure						
External Brick/Block walls						
Internal Brick/Block walls						
Concrete Slabs(On-ground or suspended) inc construction joints						
Internal Gyprock partition walls						
Internal Operable walls						
External Retaining walls						
Changeroom 1						
Changeroom 2						
Gardens						
Grassed areas including reserve/s						
Internal stairs						

The following appears in a 'drop-down' box in Microsoft Excel

Element Type	Condition Rating
motor	good
pipework	fair
tank	poor
valve	
camera	
boiler	
signage	
lighting	
gates	
ventilation	
monitoring	
water	
electricity	
gas	
diesel	
HVAC	

Water Efficiency Checklist for Buildings

This checklist is intended to assist facility managers in the evaluation of water-saving initiatives for their building.

A number of the suggestions involve specific equipment/plant.

It should be noted that water savings often bring with them energy savings.

Bathrooms and Toilets

- [ ] Repair leaks. A leaking toilet can waste 190 litres of water each day and a leaking tap or shower can waste up to 3000 litres per week.
- [ ] Showerheads and taps should be rated at "AAA" or better. These are now widely available. Ensure units being replaced through normal wear and tear are replaced with low volume models.
- [ ] Ensure water-heating units are as close as possible to outlets and check both cold and hot water relief valves for correct operation on a regular basis.
- [ ] Use dual flush toilets in new installations and when retrofitting if possible. Where retrofitting with dual flush is not possible install water displacement devices such as valves and weighted bottles into cisterns to reduce available water volume.
- [ ] Consider installing on-demand tapware and flushing systems
- [ ] Select lower volume baths

Kitchens

- [ ] Select sinks with a lower volume
- [ ] Ensure aerators are fitted to taps
- [ ] Ensure dishwashers have a "AAAA" rating and are connected to hot water.
- [ ] Consider on-demand tapware or foot triggers

Building Maintenance

- [ ] Check water supply systems for leaks and unnecessary flows
- [ ] Shut off water supply to equipment and areas that are unused
- [ ] Discontinue water circulation pumping in areas not in use
- [ ] Check correct operation of cooling system by-pass valves
- [ ] Measure cooling tower loss. Check blowdown rates where excessive to achieve recommended total dissolved solids (TDS).
- [ ] Change window cleaning from “periodic” to “as-required”
- [ ] Consider switching from “wet” carpet cleaning to “dry” cleaning

Outside

- [ ] Apply water, fertiliser and pesticides only when needed.
- [ ] Water early in the morning or in the evening when wind and evaporation are usually at their lowest.
- [ ] Install rain shut-off device to reticulation systems
- [ ] Use low volume irrigation fittings where practicable
- [ ] Adjust irrigation schedules for seasonal changes.
- [ ] Use mulch around landscape plants to reduce evaporation and weed growth

Site Security Inspection

GROUP	ISSUE	KEY CONSIDERATIONS	RATING
1 External	Carparking	Lighting; surface; kerbs; fencing; signage	
	Vegetation	Density; proximity to building/s; hiding places; proximity to overhead power;	
	Building layout	Spread of buildings; sightlines; signage; distance from carparks; pathways	
	Waste	Number of bins; material construction;	
2 Staffing	Patrols	Frequency; training; alarms; CCTV; staff numbers; times of service availability	
3 Documentation	Communication	Policies; procedures; manuals; signage; telephone/ radio; contact lists; key register	
4 Safety	Emergency Procedures	Emergency Management Plan; drills; currency of building plans; emergency control group; fire and EWIS maintenance	
	First Aid	First aid room; kits; trained staff; ambulance access	
5 Internal	Access	Door locks; electronic access control; fire services; monitored points;	
	Lighting	Compliance with AS 1680; security lighting; maintenance accessibility;	
6 Special Risk		Toilet blocks; cashiers; reception and other public desk staff;	

Project Building Checklist

NB: This is not an exhaustive list but does reference many of the most common pieces of legislation and standards that you should be aware of. Further information is available from the State Law Publisher or Standards Australia.

BUILDING SYSTEM / METHOD	LEGISLATION	STANDARDS / CODES OF PRACTICE	COMMENTS
1. Building design/repair	Building Code of Australia MWSSB drainage act Heritage Act Architects Act Painters Registration Act Builders Registration Act Public Works Act	As 1428 Design for access and mobility AS 1668 Mechanical ventilation and air conditioning in buildings As 1680 Interior lighting AS 3666 Air handling and water systems of buildings – Microbial control AS 3660 Protection of buildings from subterranean termites AS 2785 Design and installation of suspended ceilings AS 2946 Recessed luminaires and air diffusers AS 4154 General Access – elevated floors(also AS4155) AS 2047 Windows in buildings – selection and installation AS 2688 Timber doors AS 4085 Automatic sliding door assemblies AS 4420 series Windows – methods of test AS 1562 Series – Design and installation of sheet roof and wall claddings As 1852 Electrical installations of buildings AS 1768 Lightning protection AS 1170 Minimum design loads on structures AS 3826 Strengthening existing buildings for earthquakes AS 2904 Damp proof courses and flashings AS 4200 Pliable building membranes and underlays AS 3600 Series Concrete structures AS 1554 Series Structural Steel welding	
2. Access/Egress /Security Normal, after hours	Building Code of Australia OSH Act and regulations Disability Discrimination Act 1992 Code of Practice-Work on roofs	AS 1428 Design for access and mobility AS 1735 Lift code AS 2220 Emergency Warning Systems AS 3661 Slip resistance of surfaces AS 3745 Emergency procedures AS 1657 Fixed platforms, walkways, stairways and ladders AS 1909 Installation of timber doorsets AS 4290 Design and installation of revolving doors AS 2201 Security systems AS 2293 Emergency Evacuation lighting	
3. Services Electrical, electronic, gas, water, drainage, lighting	WSA02 – Sewerage Code of Australia WSA03 – Water Retic Code of Australia	AS 3000 Series Wiring Rules and installations AS 3500 Plumbing and Drainage code AS 1056 Storage water heaters AS 1308 Electric water heaters AS 2712 Solar water heaters AS 1680 Interior lighting – safe movement Guidance Note – Electricity (Residual Current Devices)	

Project Building Checklist

BUILDING SYSTEM / METHOD	LEGISLATION	STANDARDS / CODES OF PRACTICE	COMMENTS
4. Fire services, EWIS and Security Systems	Building Code of Australia Theatres and Public Halls Act	As 1603 Automatic fire detection and alarm systems AS 1682 Fire dampers AS 2118 Automatic fire sprinkler systems AS 2220 Emergency Warning and Intercommunication systems AS 2419 Fire hydrant installations AS 2442 Fire hose reel installations AS 2444 Portable fire extinguishers – selection and location AS 2665 Smoke/heat venting systems SAA Handbook 37 Australian Fire Stds AS 1851 Series AS 2293 Emergency Evacuation lighting AS 2201 Intruder alarm systems AS 3809 Safes and strongrooms AS 3745 Emergency Evacuation Procedures AS 1668 SAA mechanical ventilation and AC code AS 2427 – Smoke / heat release vents SAA Handbook 123 Guidelines for selection, installation and location of visual warning devices in buildings	
5. Lifts, hoists, materials handling	Code of Practice for Manual Handling	AS 1735 Lifts AS 1428 Design for access and mobility AS 1418 Cranes	
6. Ventilation – Fume exhaust, air conditioning, dust extraction		AS 1668 Use of mechanical ventilation and air conditioning in buildings AS 2243.8 Fume cupboards AS 2252 Biological safety cabinets AS 1324 Air filters for use in general ventilation AS 3666 Air handling and water systems of buildings – Microbial control AS 4524 Ductwork for air handling systems in buildings AS 4508 Insulation for AC ductwork AS 2365 Series – Methods for sampling and analysis of indoor air AS 2724 Series Ambient air particulate matter AS 3580 Series Ambient air sampling and analysis AS 4260 High Efficiency Particulate Filters (HEPA) SAA Handbook 40.1 Code of Practice Part 1 SAA Handbook 40.2 Code of Practice Part 2 SAA Handbook 40.3 Code of Practice Part 3	

Project Building Checklist

BUILDING SYSTEM / METHOD	LEGISLATION	STANDARDS / CODES OF PRACTICE	COMMENTS
7. Accommodation and amenities	Building Code of Australia – sanitary requirements Code of Practice for First Aid OSH Act and regulations	AS 2243.1	
8. Confined Spaces/Hotwork	OSH Act and Regulations Code of Practice	AS 2865 – Safe working in a confined space	
9. Ergonomics, fitout and furnishings		AS 2713 Lighting and the visual environment for screen based tasks AS 2243 Laboratory safety AS 1837 Application of ergomomics to factory and office work	
10. Signage	Disability Discrimination Act	Standards / Codes of Practice AS 1319 Safety signs for occupational environment AS 1345 Identification of the contents of piping,conduits and ducts	
11. Dangerous Goods	Dangerous Goods Act and regulations OSH Act and regulations	AS 1596 LPG code AS 1940 Combustible and flammable liquids AS 2243.10 Laboratory stores AS 3780 Storage and handling of hazardous chemicals and materials	

Legislative Compliance Checklist

GOVERNMENT ADMINISTRATION	LEGISLATION	OTHER
Public Sector Only	Public Sector Management Act Equal Employment Opportunity Act Financial Administration and Audit Act State Records Act State Supply Commission Act Freedom of Information Act Statutory Corporations Act(Directors Liability) Anti-Corruption Commission Act Director of Public Prosecutions Act Disability Services Act 1993 Local Government Act	Public Sector Management regulations Australian Standard 4360 – Risk Management Treasurer's Instructions Relevant Industrial Awards and workplace agreements Department of Sport and Recreation Policies State Supply Policies and Guidelines Disability Service Plans Competition Policy Principles Budget Estimates process Local Government Regulations/By-Laws
General Community	Trade Practices Act Industrial Relations Act Equal Opportunity Act Occupational Safety and Health Act Workers Compensation and Rehabilitation Act Police Act Mimimum Conditions of Employment Act Privacy Act Censorship Act Dangerous Goods Act Disability Discrimination Act 1992 Electricity Act Environmental Protection Act Fire Brigades Act Gas Standards Act Heritage Act Land Administration Act Liquor Licensing Act Litter Act Occupiers Liability Act	Corporations Law Criminal Code Occupational Safety and Health regulations

Occupational Safety and Health

	LEGISLATION	AUSTRALIAN STANDARDS/CODES OF PRACTICE/GUIDANCE NOTES
General	Occupational Safety and Health Act	Occupational Safety and Health Regulations AS 3745 – Emergency Evacuation Procedures AS 1576 – Code of Practice for metal scaffolding AS 1891 – Industrial Safety belts and harnesses AS 2626 – Industrial Safety belts and harnesses (use) AS 1892 – Portable ladders (metal) AS 2210 – Safety Footwear AS 2359 – Industrial trucks AS 3000 Series – Electrical installations AS 1345 – Identification of contents of piping and ducts AS 1219 – Power press safety requirements AS 1319 – Safety signs for the occupational environment AS 1893 – Code of practice for safe guarding of metal and paper cutting guillotines AS 3527 – Hand operated screwdrivers and bits AS 1216 – Classification, hazard identification and information systems for dangerous goods AS 1715 – Selection,use and care of respiratory devices AS 1716 – Respiratory protective devices AS 2243 – Safety in laboratories AS 2252 – Biological safety cabinets AS 2476 – General fumigation procedures AS 2647 – Biological safety cabinets (design/use) AS 2830 – Good laboratory practice AS 2865 – Safe working in a confined space AS 2927 – Storage and handling of liquified chlorine gas AS 2985 – Workplace atmospheres AS 2161 – Industrial safety gloves AS 1269 – Acoustics (hearing conservation) AS 1336 – Recommended practices for eye protection AS 1558 – Protective clothing for welders AS 2713 – Lighting and the visual environment for screen based tasks Code of practice for manual handling AS 1837 – Code of practice for the application of ergonomics to factory and office work AS HB10 – Occupational Overuse Syndrome AS 1318 – Use of colour marking of physical hazards AS 1165 – Traffic hazard warning lights (automotive) AS 1425 – LPG fuel systems for vehicle engines AS 2596 – Seat belt assemblies Code of Practice for working alone Code of Practice – Prevention of Fall in workplaces Code of Practice – Legionairres Disease Code of Practice – Fatigue management for commercial vehicle drivers Code of Practice – Safety and Health of children and young persons in workplaces Code of Practice – First aid, workplace amenities and personal protective equipment Code of Practice – Management of HIV / Hepatitis at workplaces Code of Practice – Workplace violence Guidance Note – Safe movement of vehicles at workplaces Guidance Note – Mobile phones Guidance Note – Alcohol and other drugs at the workplace Guidance Note – General duty of care in workplaces Guidance Note – Safety and Health Reps and Committees, resolution of issues Guidance Note – Electricity (Residual Current Devices) Operator Certification – Forklifts, dogging, scaffolding

	LEGISLATION	AUSTRALIAN STANDARDS/CODES OF PRACTICE/GUIDANCE NOTES
		AS 2560.1 – AS 2560.2.8: Guide to sports lighting SAA HB49.1 – Sporting Facilities Manual: Sports Lighting AS 2983 – Methods of test for synthetic sporting surfaces AS 3541 – Synthetic Sporting surfaces SAA HB49.2 – Sporting Facilities Manual: Surfaces

References

HB 261: Glossary of Facility Management Terms (Standards Australia and FMA Australia 2001).

Water Authority of Western Australia — Water Use Checklist.

Australian Centre for Public Infrastructure — *Public Infrastructure Bulletin*, March 2003.

AMQ International — *Strategic Asset Management* newsletter.